



OIKE

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/051,409

DATE: 05/03/2002

TIME: 16:14:23

Input Set : A:\12005-003001.TXT

Output Set: N:\CRF3\05032002\J051409.raw

ENTERED

```

4 <110> APPLICANT: Yang, Chu-Wen
5     Tsou, Ann-Ping
6     Chi, Chin-Wen
7     Fann, Ming-Ji
8     Chou, Chen-Kung
10 <120> TITLE OF INVENTION: CELL CYCLE REGULATOR PROTEIN
13 <130> FILE REFERENCE: 12005-003001
15 <140> CURRENT APPLICATION NUMBER: 10/051,409
16 <141> CURRENT FILING DATE: 2002-01-18
18 <150> PRIOR APPLICATION NUMBER: 60/262,885
19 <151> PRIOR FILING DATE: 2001-01-19
21 <160> NUMBER OF SEQ ID NOS: 6
23 <170> SOFTWARE: FastSEQ for Windows Version 4.0
25 <210> SEQ ID NO: 1
26 <211> LENGTH: 2424
27 <212> TYPE: DNA
28 <213> ORGANISM: Mus musculus
30 <400> SEQUENCE: 1
31 atgctggtgt cacgttttgc cagtcgggtt cggaaagact cgagcactga gatggttaga      60
32 accaacttgg ctcatagaaa gtctctgtct cagaaggaga acagacacag ggtgtatgag      120
33 cgaaacagac acttcgggtt gaaggacgtc aacattccac tggaaggggc agagcttggt      180
34 aatatacacg agacatcgca agacctctct ccagagaagg ccagctccaa aacaagggtca      240
35 gtaaaaaatg tcttgagtga ccaacggaag cagctcctcc agaagtataa ggaagaaaaa      300
36 caacttcaaa aactgaaaga acagcgagag aaagccaaac gtggagtgtt caaagtgggt      360
37 ctctatagac ccgtgcgcc ttgctttctt gtcacagacc agaggggtgc gaaagctgag      420
38 ccagaaaagg cttttccaca tactggacgg attacaagat caaagaccaa agaatatatg      480
39 gagcagacta agattggtag caggaatgtt cctaaagcaa ccagagtga ccaaagacaa      540
40 acttctgaaa aacaaccatt agacagagag agaaaagtta tgcagcctgt gctgttcacg      600
41 tcagggaaag ggactgaatc agcggctact cagagagcca agctgatggc ccgaacagtg      660
42 tcatccacta caagaaagcc agtcacaaga gccacgaatg agaaaggatc agaaagaatg      720
43 agaccaagtg gagggagacc tgccaaaaaa ccagaaggca agccggacaa ggtcattcct      780
44 tccaaagttg agcgggacga aaagcatttg gattgcgaga ccagggaaac aagtgaatg      840
45 ggtctgctcg gagtcttcog agaagtggaa agcttgcttg caacagcccc tgcccaaggg      900
46 aaggaaaagg agtcttttgc ccccaagcac tgtgtcttcc agccccctgt tggcttgaag      960
47 agctaccagg ttgctccccct gagccctaga agtgccaacg ctttcttgac acccaattgt      1020
48 gattggaacc agttaagacc agtaagtttt agcactacca ctcaagacaa agcaaattgaa      1080
49 atcttggtac agcaaggatt ggagtcgcta acagaccgta gtaaagaaca tgtcttaaat      1140
50 cagaaggggc cttctacttc agattcaaat cacgcttctg tgaaaggagt cccatgctct      1200
51 gaaggggagc aaggccagac ctctcagccc ccccaagatg tgccatactt cagaaaaatc      1260
52 ctccaatcag aaactgacag gctgacctcg cactgcctgg agtgggaggg gaagctggac      1320
53 ctggacatct ctgatgaagc taaaggtctt atccgtacaa cggttggtca aacaagactc      1380
54 cttatcaagg agagattcag acagtttgaa ggactgggtg acaactgcga gtataaacgg      1440
55 ggtgaaaagg agacgacctg cacagatctg gatggattct gggatatggt tagttttcag      1500

```

## RAW SEQUENCE LISTING

DATE: 05/03/2002

PATENT APPLICATION: US/10/051,409

TIME: 16:14:23

Input Set : A:\12005-003001.TXT

Output Set: N:\CRF3\05032002\J051409.raw

```

56 gtcgatgatg tgaaccagaa attcaacaac ctgatcaaac ttgaggcgctc aggatggaaa 1560
57 gacagcaata atccaagcaa aaaagtccctc cggaaaaaaaa ttgtgcctgg tagaacaagc 1620
58 aaagcaaagc aggatgacga cggacgagcg gcagctagga gtcgccttgc tgccataaag 1680
59 aatgcaatga aaggcaggcc acagcaggaa gtgcaggccc acgcagcagc tccggagacc 1740
60 acaaaggaag ttgacaaaat agtggtttgac gctggggtttt tcagaatcga gagcccagtg 1800
61 aagtcattct cagtcctgtc ttctgaacgt cgtttctcaaa gatttggaa acctctgtct 1860
62 gccagcaaag ttgtgcctga gggcagggtc gcaggggacc ttctgagaca gaagatgcc 1920
63 ctgaagaagc cggacctca gagcagcaag agtgagcatg ttgatcggac gttttcagat 1980
64 ggtcttgaaa gcagggtgcc cgtagaagac acccctgtc ctggagagca agattcaagt 2040
65 gacatagagc atgatgtaaa taaaataaat gtcaagatgg attgtttctc tgttgaaacg 2100
66 aatttgctc ttctgtctgg tgatgcta atcaatcaaa aagaagcaat ctgagccgtg 2160
67 gaaggagcga gcactgcagt caccctccag gatttgetga tgagcaacc tgagacaaat 2220
68 acctctcac agagcaacac ctcaacaaga gaagctgagg cgtcgcagtc agtactgtta 2280
69 cataaaagtc tcacttctga atgccacctt cttgaaccac caggcctcag ctgcaccagc 2340
70 cctgcactc gggaggagac cagacagcca gatcgcagca gacagttctc ctttgagggt 2400
71 gacctcattc tcttctcacc acta 2424
73 <210> SEQ ID NO: 2
74 <211> LENGTH: 808
75 <212> TYPE: PRT
76 <213> ORGANISM: Mus musculus
78 <400> SEQUENCE: 2
79 Met Leu Val Ser Arg Phe Ala Ser Arg Phe Arg Lys Asp Ser Ser Thr
80 1 5 10 15
81 Glu Met Val Arg Thr Asn Leu Ala His Arg Lys Ser Leu Ser Gln Lys
82 20 25 30
83 Glu Asn Arg His Arg Val Tyr Glu Arg Asn Arg His Phe Gly Leu Lys
84 35 40 45
85 Asp Val Asn Ile Pro Leu Glu Gly Arg Glu Leu Gly Asn Ile His Glu
86 50 55 60
87 Thr Ser Gln Asp Leu Ser Pro Glu Lys Ala Ser Ser Lys Thr Arg Ser
88 65 70 75 80
89 Val Lys Met Val Leu Ser Asp Gln Arg Lys Gln Leu Leu Gln Lys Tyr
90 85 90 95
91 Lys Glu Glu Lys Gln Leu Gln Lys Leu Lys Glu Gln Arg Glu Lys Ala
92 100 105 110
93 Lys Arg Gly Val Phe Lys Val Gly Leu Tyr Arg Pro Ala Ala Pro Gly
94 115 120 125
95 Phe Leu Val Thr Asp Gln Arg Gly Ala Lys Ala Glu Pro Glu Lys Ala
96 130 135 140
97 Phe Pro His Thr Gly Arg Ile Thr Arg Ser Lys Thr Lys Glu Tyr Met
98 145 150 155 160
99 Glu Gln Thr Lys Ile Gly Ser Arg Asn Val Pro Lys Ala Thr Gln Ser
100 165 170 175
101 Asp Gln Arg Gln Thr Ser Glu Lys Gln Pro Leu Asp Arg Glu Arg Lys
102 180 185 190
103 Val Met Gln Pro Val Leu Phe Thr Ser Gly Lys Gly Thr Glu Ser Ala
104 195 200 205
105 Ala Thr Gln Arg Ala Lys Leu Met Ala Arg Thr Val Ser Ser Thr Thr
106 210 215 220

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/051,409

DATE: 05/03/2002

TIME: 16:14:23

Input Set : A:\12005-003001.TXT

Output Set: N:\CRF3\05032002\J051409.raw

```

107 Arg Lys Pro Val Thr Arg Ala Thr Asn Glu Lys Gly Ser Glu Arg Met
108 225                230                235                240
109 Arg Pro Ser Gly Gly Arg Pro Ala Lys Lys Pro Glu Gly Lys Pro Asp
110                245                250                255
111 Lys Val Ile Pro Ser Lys Val Glu Arg Asp Glu Lys His Leu Asp Ser
112                260                265                270
113 Gln Thr Arg Glu Thr Ser Glu Met Gly Leu Leu Gly Val Phe Arg Glu
114                275                280                285
115 Val Glu Ser Leu Pro Ala Thr Ala Pro Ala Gln Gly Lys Glu Arg Lys
116                290                295                300
117 Ser Phe Ala Pro Lys His Cys Val Phe Gln Pro Pro Cys Gly Leu Lys
118 305                310                315                320
119 Ser Tyr Gln Val Ala Pro Leu Ser Pro Arg Ser Ala Asn Ala Phe Leu
120                325                330                335
121 Thr Pro Asn Cys Asp Trp Asn Gln Leu Arg Pro Glu Val Phe Ser Thr
122                340                345                350
123 Thr Thr Gln Asp Lys Ala Asn Glu Ile Leu Val Gln Gln Gly Leu Glu
124                355                360                365
125 Ser Leu Thr Asp Arg Ser Lys Glu His Val Leu Asn Gln Lys Gly Ala
126                370                375                380
127 Ser Thr Ser Asp Ser Asn His Ala Ser Val Lys Gly Val Pro Cys Ser
128 385                390                395                400
129 Glu Gly Ser Glu Gly Gln Thr Ser Gln Pro Pro His Asp Val Pro Tyr
130                405                410                415
131 Phe Arg Lys Ile Leu Gln Ser Glu Thr Asp Arg Leu Thr Ser His Cys
132                420                425                430
133 Leu Glu Trp Glu Gly Lys Leu Asp Leu Asp Ile Ser Asp Glu Ala Lys
134                435                440                445
135 Gly Leu Ile Arg Thr Thr Val Gly Gln Thr Arg Leu Leu Ile Lys Glu
136                450                455                460
137 Arg Phe Arg Gln Phe Glu Gly Leu Val Asp Asn Cys Glu Tyr Lys Arg
138 465                470                475                480
139 Gly Glu Lys Glu Thr Cys Thr Asp Leu Asp Gly Phe Trp Asp Met
140                485                490                495
141 Val Ser Phe Gln Val Asp Asp Val Asn Gln Lys Phe Asn Asn Leu Ile
142                500                505                510
143 Lys Leu Glu Ala Ser Gly Trp Lys Asp Ser Asn Asn Pro Ser Lys Lys
144                515                520                525
145 Val Leu Arg Lys Lys Ile Val Pro Gly Arg Thr Ser Lys Ala Lys Gln
146                530                535                540
147 Asp Asp Asp Gly Arg Ala Ala Ala Arg Ser Arg Leu Ala Ala Ile Lys
148 545                550                555                560
149 Asn Ala Met Lys Gly Arg Pro Gln Gln Glu Val Gln Ala His Ala Ala
150                565                570                575
151 Ala Pro Glu Thr Thr Lys Glu Val Asp Lys Ile Val Phe Asp Ala Gly
152                580                585                590
153 Phe Phe Arg Ile Glu Ser Pro Val Lys Ser Phe Ser Val Leu Ser Ser
154                595                600                605
155 Glu Arg Arg Ser Gln Arg Phe Gly Thr Pro Leu Ser Ala Ser Lys Val

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/051,409

DATE: 05/03/2002

TIME: 16:14:23

Input Set : A:\12005-003001.TXT

Output Set: N:\CRF3\05032002\J051409.raw

```

156      610      .      615      620
157 Val Pro Glu Gly Arg Ala Gly Asp Leu Leu Arg Gln Lys Met Pro
158 625      630      635      640
159 Leu Lys Lys Pro Asp Pro Gln Ser Ser Lys Ser Glu His Val Asp Arg
160      645      650      655
161 Thr Phe Ser Asp Gly Leu Glu Ser Arg Cys His Val Glu Asp Thr Pro
162      660      665      670
163 Cys Pro Gly Glu Gln Asp Ser Ser Asp Ile Glu His Asp Val Asn Lys
164      675      680      685
165 Ile Asn Val Lys Met Asp Cys Phe Ser Val Glu Thr Asn Leu Pro Leu
166      690      695      700
167 Pro Ala Gly Asp Ala Asn Thr Asn Gln Lys Glu Ala Ile Ser Ala Val
168 705      710      715      720
169 Glu Gly Ala Ser Thr Ala Val Thr Ser Gln Asp Leu Leu Met Ser Asn
170      725      730      735
171 Pro Glu Thr Asn Thr Ser Ser Gln Ser Asn Thr Ser Gln Glu Ala
172      740      745      750
173 Glu Ala Ser Gln Ser Val Leu Leu His Lys Ser Leu Thr Ser Glu Cys
174      755      760      765
175 His Leu Leu Glu Pro Pro Gly Leu Ser Cys Thr Ser Pro Cys Thr Arg
176      770      775      780
177 Glu Glu Thr Arg Gln Pro Asp Arg Ser Arg Gln Phe Ser Phe Gly Gly
178 785      790      795      800
179 Asp Leu Ile Leu Phe Ser Pro Leu
180      805
182 <210> SEQ ID NO: 3
183 <211> LENGTH: 2538
184 <212> TYPE: DNA
185 <213> ORGANISM: Homo sapiens
187 <400> SEQUENCE: 3
188 atgtcttcac cactttttgc cagtcgacac aggaaggata taagtactga aatgattaga      60
189 actaaaattg ctcataggaa atcactgtct cagaaagaaa atagacataa ggaatacgaa      120
190 cgaaatagac actttggttt gaaagatgta aacattccaa ccttggaagg tagaattctt      180
191 gttgaattag atgagacatc tcaagagctt gttccagaaa agaccaatgt taagccaagg      240
192 gcaatgaaaa ctattctagg tgatcaacga aaacagatgc tccaaaaata caaagaagaa      300
193 aagcaacttc aaaaattgaa agagcagaga gagaaagcta aacgaggaat atttaaagtg      360
194 ggtcgttata gacctgatat gccttgtttt cttttatcaa accagaatgc tgtgaaagct      420
195 gagccaaaaa aggcatttcc atcttctgta cggattacaa ggtcaaaggc caaagaccaa      480
196 atggagcaga ctaagattga taacgagagt gatgttcgag caatccgacc tggccaaga      540
197 caaacttctg aaaagaaagt gtcagacaaa gagaaaaaag ttgtgcagcc tgtaatgccc      600
198 acgtcgttga gaatgactcg atcagctact caagcagcaa agcaggttcc cagaacagtc      660
199 tcatctacca cagcaagaaa gccagtcaca agagctgcta atgaaaacga accagaagga      720
200 aagtgccaaa gtaaaggaag acctgccaaa aatgtagaaa caaaaccga caagggatt      780
201 tcttgtaaag tcgatagtga agaaaatact ttgaattcac aaactaatgc aacaagtgga      840
202 atgaatccag atggagtctt atcaaaaatg gaaaacttac ctgagataaa tactgcaaaa      900
203 ataaaaggga agaattcctt cgcacctaa gattttatgt ttcagccact ggatggtctg      960
204 aagacctatc aagtaacacc tatgactccc agaagtgcc atgctttttt gacaccagtc      1020
205 tacacctgga ctcttttaaa aacagaagtt gatgagtctc aagcaacaaa agaaattttg      1080
206 gcacaaaaat gtaaaactta ctctaccaag acaatacagc aagattcaaa taaattgcc      1140

```

## RAW SEQUENCE LISTING

DATE: 05/03/2002

PATENT APPLICATION: US/10/051,409

TIME: 16:14:23

Input Set : A:\12005-003001.TXT

Output Set: N:\CRF3\05032002\J051409.raw

```

207 tgtccttttg gtcctctaac tgtttggcat gaagaacatg ttttaaataa aaatgaagct 1200
208 actactaaaa atttaaatgg ctttccaata aaagaagtcc catcacttga aagaaatgaa 1260
209 ggtcgaattg ctcagcccca ccatgggtgtg ccatatttca gaaatatact ccagtcagaa 1320
210 actgagaaat taacttcaca ttgcttcgag tgggacagga aacttgaatt ggacattcca 1380
211 gatgatgcta aagatcttat tcgcacagca gttgggtcaaa caagactcct tatgaaggaa 1440
212 aggttttaac agtttgaagg actggttgat gatttgtaat ataaacgagg tataaaggag 1500
213 actacctgta cagatctgga tggatttttg gatattgtta gttttcagat agaagatgta 1560
214 atccacaaat tcaacaatct gatcaaactt gaggaatctg ggtggcaagt caataataat 1620
215 atgaatcata atatgaacaa aaatgtcttt agggaaaaag ttgtctcagg tatagcaagt 1680
216 aaacccaaac aggatgatgc tggaagaatt gcagcgagaa atgccttagc tgccataaaa 1740
217 aatgcaatga gagagagaat taggcaggaa gaatgtgctg aaacagcagt ttctgtgata 1800
218 ccaaaggaag ttgataaaat agtgttcgat gctggatttt tcagagttga aagtcctggt 1860
219 aaattattct caggactttc tgtctcttct gaaggccctt ctcaaagact tggaacacct 1920
220 aagtctgtca acaaagctgt atctcagagt agaaatgaga tgggcattcc acaacaaact 1980
221 acatcaccag aaaatgccgg tcctcagaat acgaaaagtg aacatgtgaa gaagactttg 2040
222 tttttgagta ttctgaaaag caggagcagc atagaagatg ctcaagtgtcc tggattacca 2100
223 gatttaattg aagaaaacca tgttgtaaat aagacagact tgaaggtgga ttgtttatcc 2160
224 agtgagagaa tgagtttgcc tcttcttgct ggtggagtag cagatgatat taatactaac 2220
225 aaaaaagaag gaatttcaga tgttgtgga ggaatggaac tgaattcttc aattacatca 2280
226 caggatgttt tgatgagtag ccctgaaaaa aatacagctt cacaaaatag catcttagaa 2340
227 gaaggggaaa ctaaaatttc tcagtcagaa ctatttgata ataaaagtct cactactgaa 2400
228 tgccaccttc ttgattcacc aggtctaaac tgcagtaatc catttactca gctggagagg 2460
229 agacatcaag aacatgccag acacatttct tttggtggta acctgattac tttttcacct 2520
230 ctacaaccag gagaatttt 2538
232 <210> SEQ ID NO: 4
233 <211> LENGTH: 846
234 <212> TYPE: PRT
235 <213> ORGANISM: Homo sapiens
237 <400> SEQUENCE: 4
238 Met Ser Ser Ser His Phe Ala Ser Arg His Arg Lys Asp Ile Ser Thr
239 1 5 10 15
240 Glu Met Ile Arg Thr Lys Ile Ala His Arg Lys Ser Leu Ser Gln Lys
241 20 25 30
242 Glu Asn Arg His Lys Glu Tyr Glu Arg Asn Arg His Phe Gly Leu Lys
243 35 40 45
244 Asp Val Asn Ile Pro Thr Leu Glu Gly Arg Ile Leu Val Glu Leu Asp
245 50 55 60
246 Glu Thr Ser Gln Glu Leu Val Pro Glu Lys Thr Asn Val Lys Pro Arg
247 65 70 75 80
248 Ala Met Lys Thr Ile Leu Gly Asp Gln Arg Lys Gln Met Leu Gln Lys
249 85 90 95
250 Tyr Lys Glu Glu Lys Gln Leu Gln Lys Leu Lys Glu Gln Arg Glu Lys
251 100 105 110
252 Ala Lys Arg Gly Ile Phe Lys Val Gly Arg Tyr Arg Pro Asp Met Pro
253 115 120 125
254 Cys Phe Leu Leu Ser Asn Gln Asn Ala Val Lys Ala Glu Pro Lys Lys
255 130 135 140
256 Ala Ile Pro Ser Ser Val Arg Ile Thr Arg Ser Lys Ala Lys Asp Gln
257 145 150 155 160

```

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/051,409

DATE: 05/03/2002

TIME: 16:14:24

Input Set : A:\12005-003001.TXT

Output Set: N:\CRF3\05032002\J051409.raw